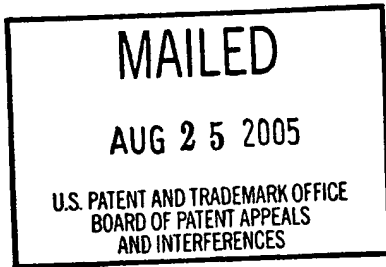


The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DANIEL J. KNABENBAURER



Appeal No. 2005-2010
Application No. 09/477,570

ON BRIEF

Before THOMAS, BARRETT, and RUGGIERO, Administrative Patent Judges.

THOMAS, Administrative Patent Judge.

DECISION ON APPEAL

Appellant has appealed to the Board from the examiner's final rejection of claims 2, 4-24, 26 and 28-49.

Representative claim 2 is reproduced below:

2. A three dimensional display, comprising:

a three dimensional matrix of light emitting elements capable of generating images in three dimensions; and

a base coupled to the three dimensional matrix, the base having electrical circuitry for powering and controlling the three dimensional matrix, wherein the light emitting elements are pixels, and wherein each of the pixels has a red light emitting element, a green light emitting element, and a blue light emitting element, and wherein the red light emitting element, green light emitting element and blue light emitting element each include a cell having an anode, a cathode, a gas volume and a phosphorus material.

The following references are relied on by the examiner:

Krembs	3,585,443	Jun. 15, 1971
Mayer et al. (Mayer)	3,790,849	Feb. 05, 1974
MacFarlane	5,801,666	Sep. 01, 1998

All claims on appeal stand rejected under 35 U.S.C. § 103.

As evidence of obviousness as to claims 2 and 26 only, the examiner relies upon Krembs in view of MacFarlane. As to all claims on appeal, claims 2, 4-24, 26 and 28-49, the examiner also relies upon Mayer in view of MacFarlane.

Rather than repeat the positions in detail here of the appellant and the examiner, reference is made to the brief and reply brief for appellant's positions, and to the answer for the examiner's positions.

OPINION

We reverse both stated rejections of the claims on appeal essentially for the reasons set forth by appellant in the brief and reply brief to which we will make reference.

From our perspective, we are not able to ascertain exactly how the examiner views that the artisan would have combined the structures and/or the teachings of the respective references in the two stated rejections of the claims on appeal. The examiner's views are generally regarded by us as speculative conclusions. In other words, the artisan would have had to speculate based upon prohibited hindsight to arrive at the proposed combination. Although it may have been possible to combine the references in some manner in each of the respective rejections, the rationale of the examiner to do so is somewhat elusive. We are therefore forced to conclude that the respective subject matter of each independent claim on appeal would not have been obvious to the artisan within the meaning of 35 U.S.C. § 103. In other words, the proposed combination would not necessarily have been prospective in nature based upon the teachings and suggestions of the applied prior art in each rejection.

As for the first stated rejection of independent claims 2 and 26 on appeal relying upon the combination of Krembs in view of MacFarlane, we agree with appellant's views as to Krembs in the principal brief that since a single gas is provided in the box of this reference, it is then monochromatic and therefore cannot have separate red light emitting elements, green light emitting elements, and blue light of emitting elements for each cell, even if we construe that a given cell may be the intersection of perpendicular wires according to Krembs' showings. As such, it appears to us as well that this reference cannot have such elements in which each of these three elements includes a cell having an anode, a cathode, a gas volume and a phosphorus material.

Correspondingly, MacFarlane does not teach red, green, and blue light emitting elements, each including a cell having an anode, a cathode, a gas volume and a phosphorus material. The disclosed voxels such as in Fig. 6 of MacFarlane do not have an anode, a cathode, or a gas volume.

In view of these considerations of appellant's arguments, with which we fully agree, it is not entirely clear to us how the two completely different display devices can be combined

within 35 U.S.C. § 103 to have arrived at the presently claimed subject matter of independent claims 2 and 26 on appeal. The voxels of MacFarlane cannot simply be inserted into the gas filled box of Krembs without destroying the arrangement of Krembs. We are somewhat perplexed as to how the examiner proposes a gas discharge based apparatus, such as taught by Krembs, would have been combinable with an ultraviolet light energizing voxel-based apparatus as in MacFarlane. The technologies seem to operate in completely different manners and are apparently incompatible with one other. Thus, we inescapably conclude that they are not properly combinable within 35 U.S.C. § 103.

We conclude our discussion of the first stated rejection by generally agreeing with appellant's observations as to Krembs and MacFarlane as set forth at pages 8 and 9 of the reply brief:

Krembs clearly shows a monochromatic three-dimensional display. How would the Examiner modify Krembs to include red, green and blue light emitting elements? The Examiner never once addresses this. The Examiner merely states that simply because MacFarlane teaches voxels that may be red, green and blue that somehow this means that the Krembs reference could be modified to provide red, green and blue light emitting elements. How? While the voxels in MacFarlane may have different colors, how would one modify a monochromatic gas filled box based display to have a plurality of colors? There is no teaching or suggestion in either reference as to how to do this. The only teaching or suggestion to provide a three

dimensional display having a three dimensional array of pixels each pixel having red, green and blue light emitting elements and each of the red, green and blue light emitting elements having a cell with an anode, a cathode, a gas volume and a phosphorus material, is provided by Appellant's own claims. Thus, despite the allegations made by the Examiner, one cannot simply make Krembs have a red, green and blue light emitting element simply because MacFarlane teaches voxels that may have a plurality of different colors.

Overall, it appears that corresponding reasons exists for reversal of all the claims on appeal in the second stated rejection relying upon Mayer in view of MacFarlane. The architecture of Mayer appears to be somewhat similar to that of Krembs. We generally agree with appellant's characterization of Mayer's teachings at the top of page 13 of the principal brief on appeal where the discussion of three dimensional Figure 9 in this reference at column 6 appear to indicate that each panel of the three dimensional embodiment may emit different colors by using different gases or different phosphors associated with respect to each of them.

The additional teachings only briefly noted by the examiner of column 6, lines 45-51, of Mayer do not appear to us to help the examiner's position either. It is generally indicated there that the side panels 11 and 12 of representative Fig. 2 could have a multi-colored phosphors applied in spots, such that the discharge of any particular cell 102 would then cause the

particular phosphor adjacent each cell to glow. This teaching appears to indicate that each cell 102 would have a particular phosphor associated with it and not the required red, green and blue colors for each cell as required by independent claims 2 and 26 on appeal. At best, the artisan would appear to us to have ascertained from these modifying teachings that any given panel of a three dimensional embodiment may include multi-colored spots, but any given cell would have identified with it only a single spot color.

We are therefore left with the same conclusion as with respect to the initial combination of Krembs and MacFarlane that Mayer and MacFarlane appear to be not combinable because the structures and functions of the two display devices appear to be so remarkably different from each other. Any successful combination within 35 U.S.C. § 103 of the teachings and structures of these references would have been clearly based upon prohibited hindsight reasoning.

In closing with respect to the second stated rejection, we find ourselves also in agreement with the positions of appellant at pages 10 and 11 of the reply brief which we reproduce here:

From the above, it is clear that Appellant's argument is that the panels in Mayer are not pixels or cells and there is no element in Mayer that is equivalent to pixels or cells. It is not clear what the Examiner is equating the panels in Mayer to in the claim. Whether the panels in Mayer are pixels, red, green, or blue light emitting elements, or cells is not clear. It seems that the Examiner is equating the panels with the red, green and blue light emitting elements. If this is so, wherein in Mayer are the pixels and the cells of claim 2 and 26 taught? The Examiner fails to address this. Rather, the Examiner merely makes statements that Mayer teaches layers of panels that may have different colors and wires that may act as cathodes and anodes. Even if this is true, where are the other elements of claims 2 and 26? As with every other rejection made by the Examiner, rather than actually examining all of the features of the claims, the Examiner picks and chooses features that he wants to address and ignores the others.

In Appellant's argument, Appellant assumed that the Examiner was interpreting Mayer as teaching each panel having pixels within the panel (Appellant must make assumptions as to how the Examiner is interpreting the reference since the Examiner is never clear as to what features of the claims are being rejected by the elements in the references). If this is so, then in Mayer, each pixel does not have a red, green and blue light emitting element, each of these light emitting elements having a cell with a cathode, an anode, a gas volume and a phosphorus material. This is because each pixel within a panel has only one color due to the fact that the panels in Mayer are constructed in a similar manner as the box in Krembs, i.e. a gas filled panel with a wire grid. Thus, if the panels of Mayer are considered colored light emitting elements and each panel has pixels, then each pixel only has one color and Mayer does not teach the specific feature of the claims 2 and 26 where each pixel has red, green and blue light emitting elements and each of these elements have a cell with an anode, a cathode, a gas volume and a phosphorous material.

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